

REMARKS

Reconsideration and withdrawal of the rejections to the claims set forth in the Office Action of March 27, 2003 are respectfully requested in view of the following remarks.

Status of the claims

Claims 1-27 were pending.

Claims 15-27 are canceled without prejudice.

Claims 1-7, 12, and 13 stand rejected under 35 U.S.C. § 103.

Claims 8-11 and 14 are objected to.

Restriction Requirement

The Examiner issued a restriction requirement via a telephone conference call. In response, Applicant elected Group I, claims 1-14. The remaining claims are canceled without prejudice. Applicant reserves the right to continue prosecution in a divisional application.

Claim Rejections – 35 U.S.C. § 103

The Examiner has rejected claims 1-7, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,118,369 to Boesch (“the Boesch reference”) in view of U.S. Patent No. 6,397,670 to Dufournier et al. (“the Dufournier reference”). Reconsideration and withdrawal of this rejection are respectfully requested based on the following remarks.

As defined in claim 1, the instant invention concerns a method of detection of a run-flat condition of a vehicle tire. The method includes the following: (1) a quantity $f(\alpha, t)$ is sensed, which varies with the angular displacement of the wheel in time; (2) measuring signals are developed from that quantity, which vary with the angular speed of the wheel $d\alpha(t)/dt$; (3) a quantity characteristic of the dispersion of measuring signals is calculated; and (4) an alarm is

set off when the characteristic quantity satisfies a given ratio. (emphasis added) Thus, the invention concerns detecting a run flat condition of a given tire of the vehicle.

In contrast to the present invention, in the Boesch reference, all four wheel rotational signals must be input to a processor in order to alert the driver when a low pressure condition is detected. It is clear that this step must be done globally for the four wheels of the vehicle. The Boesch reference, col. 3, lines 19 – 30 states:

The low tire pressure sensing metric process 108 utilizes a unique algorithm which subtracts the difference of the accumulated displacement values between the rear wheels divided by their mean displacement from the accumulated displacement values between the front wheels divided by their mean displacement. This processing of the individual wheel displacements determines if a low tire pressure condition exists for a tire. The calculated metric is then compared with a predetermined baseline metric to determine an absolute value of a calibrated metric. The absolute value of the calibrated metric is then processed in a “low tire warning confidence filter” process 110. (emphasis added)

Thus, the Boesch reference requires the combination of the four wheel rotational signals in order to alert the driver when a low tire pressure is detected. The instant application, however, is not so limited and is applicable a single wheel.

The Dufournier reference does not satisfy the missing limitations. It relates to a method of signal analysis of the mechanical vibrations of the chassis of the vehicle. The Dufournier reference applies to signals derived from a characteristic mechanical vibration sensed by a sensor placed within the chassis of the vehicle, whereas, in the instant application, the signal directly corresponds to the variation of rotational speed derived from a sensor on the given wheel.

The Boesch reference and the Dufournier reference, separately or in combination, thus, do not disclose or suggest, either expressly or inherently, each and every element of claim 1 of the instant application. The Boesch reference is deficient in that it discloses that rotational signals from all four wheels must be input to a processor in order to alert the driver when a low

pressure condition is detected, rather than from a given wheel as in the instant claimed invention. The Dufournier reference is deficient in that its signal analysis is applied to mechanical vibrations of the chassis, rather than a variation of rotational speed of a given wheel as in the instant claimed invention. Because these references do not disclose or suggest, each and every element of claim 1, the rejection under 35 U.S.C. § 103(a) should be withdrawn and claim 1 should be allowed.

Claims 2-7, 12, and 13 which are dependent directly or indirectly on claim 1 are therefore also patentable over the Boesch reference in view of the Dufournier reference.

Allowable Claims.


Applicant wishes to thank the Examiner for indicating the allowance of claims 8-11 and 14 if rewritten in independent form. In light of the aforementioned remarks regarding claim 1, Applicant believes that claims 8-11 and 14 are patentable as written.

Conclusion

In view of the foregoing, the application is now believed to be in condition for formal allowance. Prompt and favorable action is respectfully requested. A check in payment of the requisite extension of time fee is enclosed. Applicant does not believe that any additional fee is required in connection with the submission of this document. However, should any additional fee be required, or if any overpayment has been made, the Commissioner is hereby authorized to charge any fees, or credit or any overpayments made, to Deposit Account 02-4377.

Respectfully submitted,
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